



**UNITED STATES DEPARTMENT OF COMMERCE**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/400,350	09/20/99	TEGREENE	C MVIS-97-14CI

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WM01/0521

EXAMINER

NGUYEN, K

ART UNIT

PAPER NUMBER

2674

DATE MAILED:

05/21/01

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.

09/400,350

Applicant(s)

TEGREENE ET AL.

Examiner

Kevin M. Nguyen

Art Unit

2674

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 2-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 18) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The information disclosure statement (IDS) filed 11/21/2000 which has been placed in the application file. The information referred to therein has been considered as to the merits.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 2-10, 16 and 26-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Montagu (IDS) (5,225,923).
4. As to claim 2, Montagu teaches a scanner assembly which includes a the x-axis deflector assembly having two resonant scanners (50 and 52), an amplitude-control circuit 110 (fig. 7, col. 7, line 58), the dichroic mirror 36 (fig. 1) corresponding to the claimed a controllable optical element (fig. 3, col. 6, lines 49-50).
5. As to claims 3 and 5, Montagu teaches the light beam hits mirror 60 at a point spaced from that mirror's pivot axis (Fig. 3, col. 5, lines 15-16).
6. As to claim 4, Montagu teaches pivoting of mirror 60 changes not only the angle at which the incoming and outgoing beams 62 thus are deflected but also the point on the mirror 60 at which those beam hit it (col. 5, lines 17-20).

7. As to claims 8-10, both Montagu and Dhuler teach deflector providing an electrical signal indicative of an angle.
8. As to claim 16, Montagu teaches a laser 18 (fig. 1), scanning mirror 60, 56 and 54 (fig. 3), the dichroic mirror 36 (fig. 1) corresponding to the claimed an active optical element.
9. As to claims 26-29, Montagu teaches the Fourier expansion of a rectangular wave of period T and positive and negative amplitudes of unity--i.e., a peak-to-peak amplitude of two--is given by the following: EQU1 (col. 4, lines 55-65).

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 6, 7, 17-20 and 21-25, are rejected under 35 U.S.C. 103(a) as being unpatentable over Montagu in view of Dhuler et al (5,914,801).
12. As to claims 6, 7, 17-20 and 21-25, Montagu teaches all of the claimed limitations of claim 2, except for MEMs. However, Dhuler teaches a microelectromechanical (MEM) device (abstract). It would have been obvious to a person of ordinary skill in the art at the time of the invention to utilize the MEMs taught by Dhuler in the scanner of Montagu's system because this would provide to improved electromechanical devices and methods, provide an electromechanical rotating plate with can reduce the torque needed to effect rotation (col. 2, lines 2-10 of Dhuler).

***Claim Rejections - 35 USC § 102***

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

14. Claims 11 and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Wood et al (6,229,649).

15. As to claims 11 and 15, Wood et al teaches the wavefront distorted optical image (abstract) and computer 16 corresponding to the claimed an electronic controller (fig.1, col. 3, lines 5-13), Fourier transform lens 30 corresponding to the claimed a detector aligned (col. 3, line 3-5).

***Claim Rejections - 35 USC § 103***

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wood et al in view of Dhuler et al (5,914,801).

18. As to claims 12-14, Wood et al teaches all of the claimed limitations of claim 11, except for the wavefront corrector includes a MEMs device. However, Dhuler et al teaches a microelectromechanical devices including rotating plates and related

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methods. It would have been obvious to a person of ordinary skill in the art at the time of the invention to utilize a microelectromechanical devices taught by Dhuler et al in the optical image of Wood's system because this would reduce degree of distortion.

**Conclusion**

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892 form.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin M. Nguyen whose telephone number is 703-305-6209. The examiner can normally be reached on MON-FRI from 9:00-5:00 with alternate Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard A Hjerpe can be reached on 703-305-4709. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-6306 for regular communications and 703-308-6606 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

Kevin M. Nguyen  
Examiner  
Art Unit 2674

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KN  
May 14, 2001

A handwritten signature in black ink, appearing to read 'R. Hjerpe', is positioned above the printed name.

**RICHARD HJERPE**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2600**